*Chapter 17: Developing concepts of Decimals*

*and percents (pgs.338-345) sarah hutson*

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| **Representative TN State Curriculum Standards**  Grade 4- Standard 3 Algebra  GLE 0406.3.1-Extend understanding of a variable to equations involving whole numbers, fractions, decimals, and/or mixed numbers.  Grade 4- Standard 3 Algebra  Checks for Understanding 0406.3.1- Find an unknown quantity in simple equations using whole numbers, fractions, decimals, and mixed numbers.  Grade 4- Standard 2 Number and Operations  SPI 0406.2.10- Solve contextual problems using whole numbers, fractions, and decimals  Grade 5- Standard 2 Number and Operations  GLE 0506.2.5- Develop fluency in solving multi-step problems using whole numbers, fractions, mixed numbers, and decimals.  Checks for Understanding 0506.2.5- Make reasonable estimates of fraction and decimals sums and differences.  0506.2.7- Understand the decimal point in calculations of multiplication and long division, including the placement in the estimation of the answer.  SPI 0506.2.5- Solve addition and subtraction problems involving both fractions and decimals. | |
|  | Time: 7 minutes  Before reading the Fractions, Decimals and Percent’s, the teacher will have taped 36 index cards on the board. These cards will be facing down, to where the blank side is showing. Each card will have a fraction, decimal, or percent. There will be a matching card that has the equivalent of the fraction, decimal, or percent. This will be done after reading the book.  Procedure:   1. Have one student at a time come to the board and pick one card. The student will look at the card and tell you it’s equivalent in either fraction, decimal, or percent. Depending on what is on the card. 2. After the student has picked one card, they will take another card off of the board. They will be expected to know if the new card is the equivalent of what was on the first card they chose. 3. If the student does not pick the equivalent, they will place both cards back on the board (face down). 4. If the student picks the correct equivalent, they will keep the cards. And the next student has a turn. 5. The student with the most cards wins. |

**Virtual Manipulatives**

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| **Changing Fractions and Decimals to Percent’s**  **Time: 3 minutes**  [**http://www.math-play.com/Changing-Fractions-and-Decimals-to-Percents/changing-fractions-and-decimals-to-percents-millionaire.html**](http://www.math-play.com/Changing-Fractions-and-Decimals-to-Percents/changing-fractions-and-decimals-to-percents-millionaire.html)  **This virtual manipulative, allows students to play the popular “Who Want’s to be a Millionaire” game with changing fractions and decimals to percent’s.** |
| **Estimate Sums and Differences of Decimals**  **Time: 3 minutes**  [**http://www.ixl.com/math/grade-4/estimate-sums-and-differences-of-decimals**](http://www.ixl.com/math/grade-4/estimate-sums-and-differences-of-decimals)  **This virtual game, will allow the class to estimate the sum and differences of decimals.** |

**Activities from Textbook**

Lesson 1- Activity 17.11 (pg. 343)

*Exact Sums and Differences*

Time: 3 minutes

Materials:

1. Paper
2. Elmo Projector
3. Adding and Subtracting equations using decimals

Lesson 2- Activity 17.12 (pg. 343)

*Where does the decimal go? Multiplication*

Time: 3 minutes

Materials:

1. Paper
2. Elmo Projector
3. Calculators

Lesson 3- 17. 13 (pg. 345)

*Where does the decimal go? Division*

Time: 3 minutes

1. Paper
2. Elmo Projector
3. Calculators

Lesson 4- Figure 17.16 (pg. 341)

*Coats for Sale!*

Time: 5 minutes

1. Poster board with “COATS” for sale
2. Strips of paper cut in to 5 pieces
3. Elmo Projector
4. Word problem

**Lesson Plan**

Time: 15 minutes

Beans Counting and Ratios

<http://illuminations.nctm.org/LessonDetail.aspx?id=L722>

In this activity, groups of students will be given one bowl with 30 marked beans and 15 unmarked beans. The students will use Activity Sheet A that will be provided. They will perform 4 different trials by taking a handful of beans. After taking a handful of beans, they will count how many beans are marked and how many are not marked. They will first record the number of each, then the total of beans, a ratio of the marked beans, and then convert the number of marked beans to a decimal.